Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1. (cancelled)

2. (previously presented): A method of analyzing contaminants adhering to a sample taken from semiconductor device fabrication equipment comprising:

a) immersing the sample in a chemical composition solution comprising equal amounts by volume of sulfuric acid, hydrogen fluoride, and nitric acid;

b) dissolving the sample in the chemical composition solution by heating the chemical composition solution to a first lower inner temperature and then to a second higher inner temperature, and maintaining the second higher inner temperature for a predetermined period of time;

c) cooling the chemical composition solution containing the dissolved sample to room temperature;

d) diluting the cooled chemical composition solution containing the dissolved sample with deionized water; and

e) analyzing the diluted chemical composition solution containing the dissolved sample.

3. (previously presented): The method of claim 2, further comprising after said cooling, removing any fumes contained in the chemical composition solution containing the dissolved sample.

4. (previously presented): The method of claim 3, wherein said removing further comprises irradiating infrared light onto the chemical composition solution containing the dissolved sample surface using an infrared lamp in order to increase the temperature of the dissolved sample thereby causing any fumes in the dissolved sample to evaporate.

5. (previously presented): The method of claim 4, wherein during said removing, the temperature of the chemical composition solution containing the dissolved sample is increased to between about 60°C and 80°C by irradiating the sample with the infrared lamp.

6. (previously presented): The method of claim 2, wherein the immersing further comprises,

(a) adding the chemical composition solution and the sample to a sample container,

(b) sealing the sample container,

(c) placing the sealed sample container in a pressure container for further sealing,

(d) placing the pressure container into a temperature-variable dry oven, and

(e) raising the temperature in the dry oven to thereby heat the chemical composition solution and the sample in the sample container.

7. (cancelled)

8. (currently amended): The method of claim ~~7~~ 6, wherein the first lower inner temperature is in a range of from about 100°C to about 140°C.

9. (currently amended): The method of claim ~~7~~ 6, wherein the second higher inner temperature is in a range of from about 200°C to about 260°C.

10. (currently amended): The method of claim ~~7~~ 6, wherein said increasing of the inner temperature of the dry oven to the second higher inner temperature is performed with a temperature cycling sequence comprising,

(a) increasing the inner temperature of the dry oven for about 140 to 160 seconds after the first lower inner temperature has been reached, until an intermediate temperature is reached, the intermediate temperature being above the first lower inner temperature and below the second higher inner temperature;

(b) maintaining the first intermediate temperature reached in (a) for 3 to 6 seconds;

(c) decreasing the inner temperature of the dry oven for 45 to 55 seconds;

(d) increasing the inner temperature of the dry oven for about 140 to 160 seconds until another higher intermediate temperature is reached;

(e) maintaining the higher intermediate temperature reached in (d) for 3 to 6 seconds;

(f) decreasing the inner temperature of the dry oven for 45 to 55 seconds;

(g) repeating (d), (e) and (f) until the second higher inner temperature is reached.

11. (original): The method of claim 2, wherein the sample contains one of silicon carbide, quartz or zirconium.

12. (previously presented): The method of claim 10, wherein the second higher inner temperature is maintained for about 22 to 26 hours to dissolve the sample.

13. (currently amended): The method of claim ~~7~~ 6, wherein the cooling of the dissolved sample further comprises, decreasing the inner temperature of the dry oven, and removing the pressure container from the dry oven.

14. (original): The method of claim 13, wherein decreasing the inner temperature of the dry oven is carried out for 20 to 40 minutes.

15. (previously presented): The method of claim 2, wherein said diluting is achieved by making a solution of about 10 to 20 weight percent of the chemical composition solution containing the dissolved sample and about 80 to 90 weight percent of deionized water.

16. (original): The method of claim 2, wherein the analyzing is accomplished using an Atomic Absorption Spectrometer.

17. (original): The method of claim 2, wherein the analyzing is accomplished using an Atomic Emission Spectroscope.

18. (previously presented): The method of claim 2, wherein during said immersing, about 0.1 to 0.3 g of the sample is immersed in about 10 to 20 ml of the chemical composition solution.

19. (currently amended): The method of claim ~~7~~ 6, wherein the sample is aluminum oxide.

20. (original): The method of claim 19, wherein the second higher inner temperature is maintained for about 45 to 55 hours to dissolve the sample.